

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P474014

Luminaire Tested: **24CZ2-45-S-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474014
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45-S-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

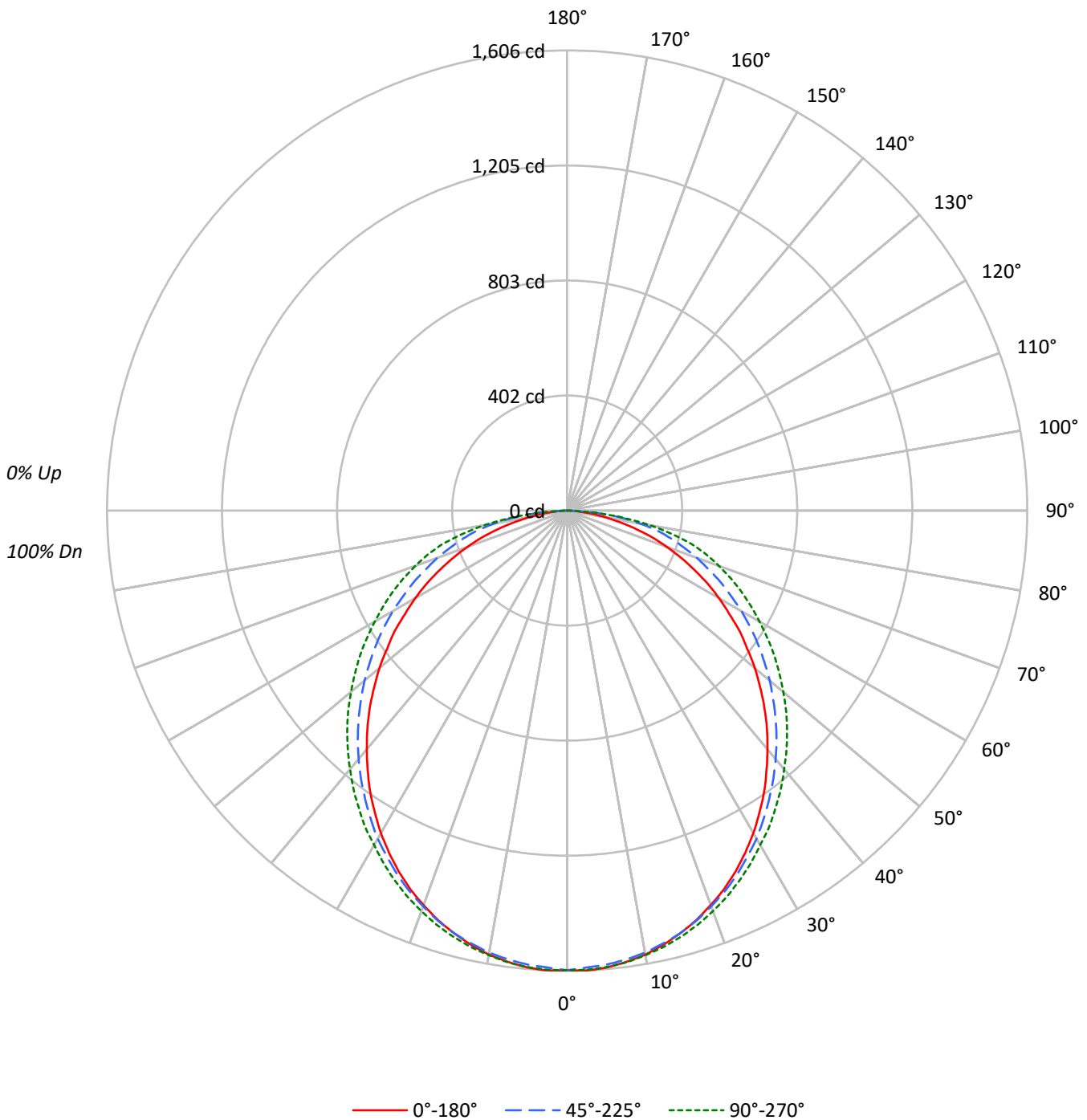
Lumens per Lamp: N/A
Luminaire Lumens: 4596.2 lumens
Efficiency: N/A
Efficacy: 131.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 34.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10	0		
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	108	103	99	95	105	101	97	93	97	93	90		93	90	87		89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74		81	76	72		78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62		71	65	61		68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52		63	57	52		61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45		57	50	45		55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40		51	44	39		50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35		47	40	35		45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31		43	36	31		42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28		39	33	28		38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26		37	30	25		36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2159	2159	2159
5°	2162	2148	2160
10°	2150	2140	2153
15°	2127	2126	2144
20°	2098	2105	2131
25°	2063	2081	2114
30°	2020	2055	2094
35°	1969	2019	2082
40°	1911	1989	2070
45°	1853	1958	2066
50°	1791	1931	2061
55°	1727	1907	2072
60°	1648	1889	2086
65°	1560	1882	2137
70°	1455	1892	2212
75°	1295	1947	2331
80°	1058	1989	2276
85°	746	1737	1772



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.7	3.3
10°-20°	432.0	9.4
20°-30°	647.5	14.1
30°-40°	771.2	16.8
40°-50°	795.2	17.3
50°-60°	725.6	15.8
60°-70°	580.2	12.6
70°-80°	379.0	8.2
80°-90°	113.8	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1231.1	26.8
0°-40°	2002.4	43.6
0°-60°	3523.1	76.7
0°-90°	4596.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4596.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1604	1604	1604	1604	1604	
5°	1600	1598	1591	1600	1599	152
15°	1527	1528	1526	1539	1539	431
25°	1390	1392	1402	1422	1424	640
35°	1199	1207	1229	1260	1268	749
45°	974	991	1029	1072	1086	751
55°	736	757	813	867	883	656
65°	490	523	591	649	671	486
75°	249	291	374	435	448	265
85°	48	87	112	115	115	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1604.3	1604.3	1604.3	1604.3	1604.3
2.5°	1606.5	1604.3	1596.0	1605.8	1604.3
5°	1600.5	1597.5	1590.7	1600.5	1599.0
7.5°	1588.4	1586.9	1580.1	1591.4	1589.9
10°	1573.3	1571.8	1566.5	1577.8	1575.6
12.5°	1552.2	1551.4	1547.6	1561.2	1559.7
15°	1527.3	1528.0	1526.5	1539.3	1539.3
17.5°	1498.6	1497.8	1500.8	1516.7	1515.2
20°	1465.4	1466.1	1469.9	1488.0	1488.0
22.5°	1430.6	1429.9	1438.2	1456.3	1457.8
25°	1389.9	1392.1	1401.9	1422.3	1423.8
27.5°	1346.1	1349.8	1361.9	1385.3	1387.6
30°	1300.0	1304.5	1322.7	1344.6	1347.6
32.5°	1249.4	1259.3	1275.9	1303.8	1311.3
35°	1198.9	1207.2	1229.1	1260.0	1267.6
37.5°	1143.0	1156.6	1181.5	1215.5	1225.3
40°	1087.9	1101.5	1132.4	1167.9	1178.5
42.5°	1032.0	1046.4	1081.8	1121.9	1133.2
45°	973.9	991.2	1029.0	1072.0	1085.6
47.5°	914.2	934.6	975.4	1022.2	1037.3
50°	855.4	875.7	922.5	970.9	984.5
52.5°	791.9	817.6	867.4	919.5	933.1
55°	736.1	757.2	813.1	866.7	883.3
57.5°	670.4	699.1	758.7	813.1	828.9
60°	612.3	638.7	702.1	757.2	775.3
62.5°	553.4	580.6	644.0	706.6	723.2
65°	490.0	523.2	591.1	649.3	671.1
67.5°	429.6	464.3	533.7	595.7	618.3
70°	369.9	405.4	480.9	544.3	562.4
72.5°	311.0	348.0	426.5	488.5	509.6
75°	249.1	290.7	374.5	434.8	448.4
77.5°	191.0	237.1	321.6	362.4	372.2
80°	136.6	187.2	256.7	286.1	293.7
82.5°	89.8	138.9	191.8	207.6	205.3
85°	48.3	86.8	112.5	114.8	114.8
87.5°	18.9	34.7	35.5	27.2	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)